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ESTABLISHING AN OFFSHORE MUSSEL FARM IN FEDERAL WATERS IN THE GULF OF MAINE

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NOAA NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION U.S. DEPARTMENT OF COMMERCE

Project Goals

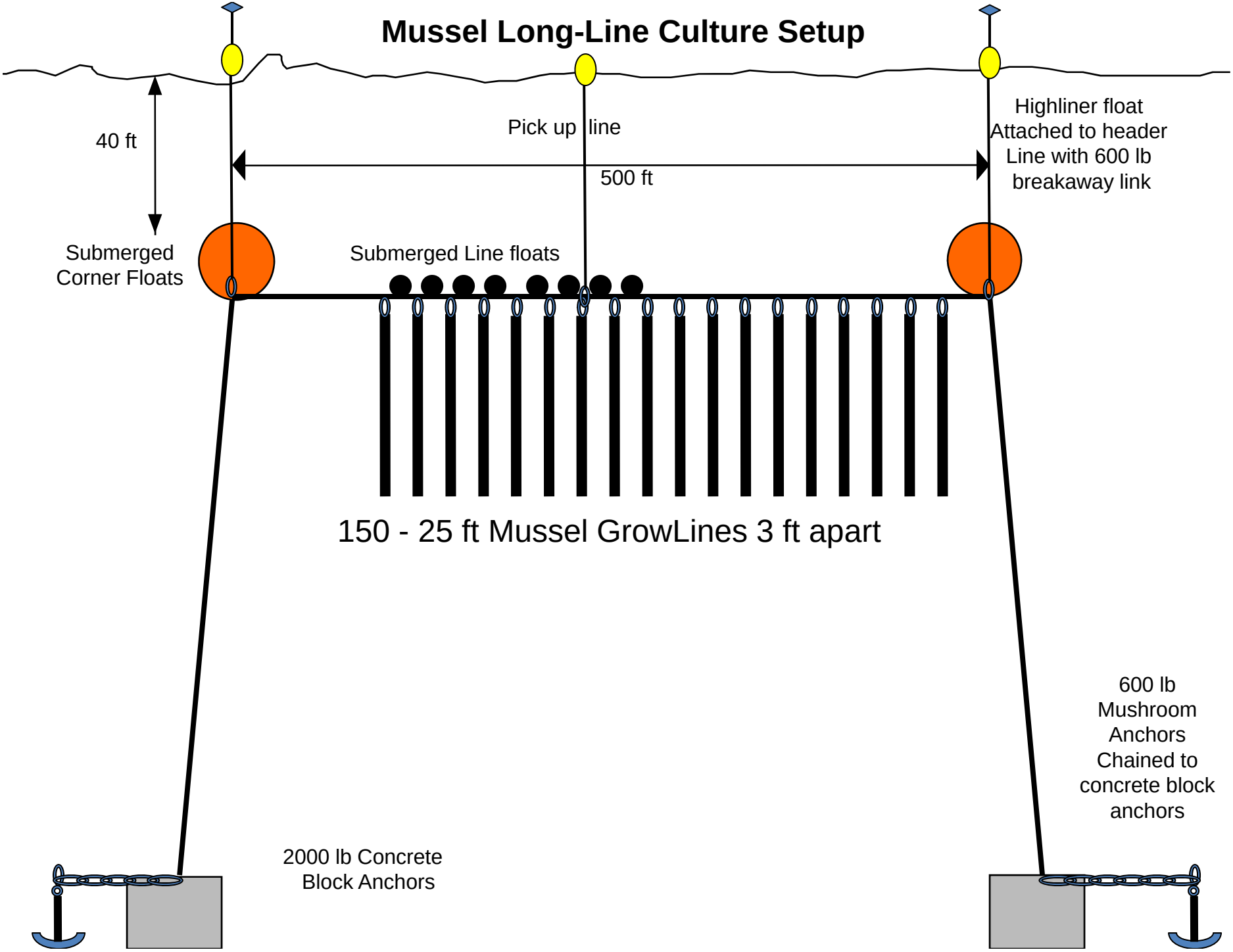
- Permit and Establish a commercial scale (33 acre, 1.44 million sq ft.) submerged blue mussel (*Mytilus edulis*) farm in federal waters 8.5 miles off Cape Ann, Massachusetts.
- Refine and enhance offshore mussel culture as an alternative fishing option for fishermen and lobstermen currently displaced or negatively impacted by current fishery restrictions.
- To increase the participation of the Gloucester, MA area displaced fishing industry participants into aquaculture.

Permitting

- The proposed full-scale farm will consist of 40 – 500 ft submerged longlines in a 2 by 20 array.
- Initial Permit Application submitted to ACOE pursuant to Sec 10 Rivers and Harbors Act (33 USC Sections 401)
- Public Comment period ended May 23, 2013

Proposed NEMAC Offshore Mussel Farm Site

Figure 1. Proposed NEMAC Offshore Mussel Farm Site


Mussel Long-Line Culture Setup
40 ft
Pick up line
500 ft
Highliner float
Attached to header
Line with 600 lb
breakaway link
Submerged
Corner Floats
Submerged Line floats
150 - 25 ft Mussel GrowLines 3 ft apart
600 lb
Mushroom
Anchors
Chained to
concrete block
anchors
2000 lb Concrete
Block Anchors

Site Description

- 150ft Average Depth
- Bottom profile
  - Predominantly cobble
  - Scattered small boulders
  - Some gravel and sand
- Bottom Currents
  - East (90°) to West (240 – 270°) with an average velocity 0.1 m/s (0.19 knots)

Permitting Concerns

Impacts To Current Fisheries

- Minimal impact to established fisheries (lobster, gillnet)
- Vessel Trip Reports (NOAA/NMFS)
  - In 2011 the percent of catch landed from within 2nm of the proposed site is less than 0.01%
  - For the years 2007 – 11, landings never gets above 0.08%.
  - Proposed site is .02 nm sq within this area
- Cooperative lobster fishing is possible?

Permitting Concerns

Endangered Species Protection

- **Not Likely to Adversely Affect (NLTAA) determination desired**
  - Longline under tension
  - break away links on marker lines
  - Longline submerged at least 25 ft (surface feeding)
  - Bottom clearance at least 60 ft (bottom feeding)
  - Mussel grow lines less than 26 ft (8M)
  - Report observations
  - Frequent site visits
  - No reported entanglements in other NE mussel farms

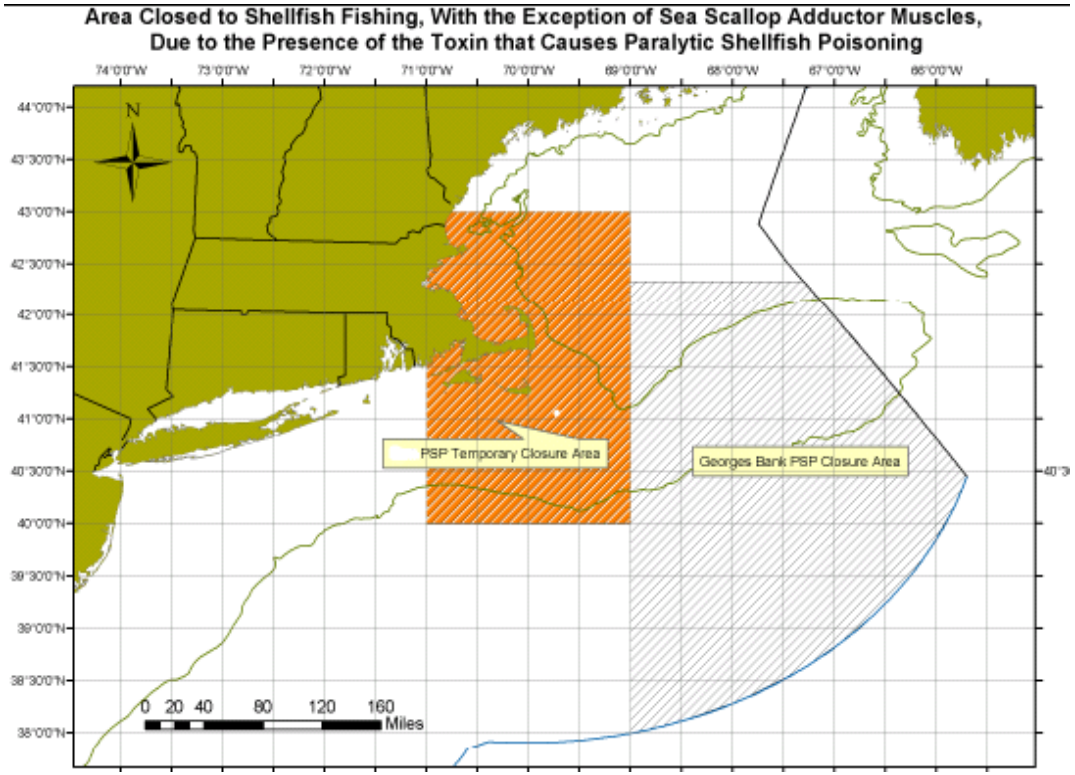
Permitting Concerns

Navigation

- Navigation Safety Risk Assessment (NSRA) for USCG Determination (NVIC 02-07)
- Each longline and submerged floats will be configured to allow a minimal depth clearance of 40 feet from the surface
  - Allows collision avoidance with deep draft vessels transiting the site.
- Each longline will have a surface float with a hy-flyer radar deflector for visual marking and servicing of lines. All surface buoys will be uniformly colored (to be determined) and marked with the NEMAC Logo and phone number.
  - All surface buoys will have break away links and configured to be in compliance with 50 CFR 229.32
- The site corners will be clearly marked with identifying buoys that are lighted at night to allow vessels to avoid this area.
- Site will be listed in Notice to Mariners

Federal Temporary PSP Closures

- Closed since 2005
- Recent opening of Georges Banks to Atlantic surfclams and Ocean Quohog Fishery
  - Requires on-board and dockside PSP toxin testing
  - FDA/NSSP, MA DPH regulations
- Looking into similar options for permitting



MA DMF 2005

Other Issues

- Exempted Fishing Permit (EFP) issued by the National Marine Fisheries Service (NMFS)
  - harvesting from Federal waters that are not routinely monitored for PSP
- State Permits
  - Aquaculture
    - Seed collection and transfers in state waters
  - Shellfish
    - Landing in state waters
    - Requires EFP
  - Shellfish Dealer

Outcomes for Fishing Community

- Demonstrate that offshore mussel (shellfish) farming is a profitable and compatible means as a supplemental and/or alternative option for fishermen currently displaced or negatively impacted by current fishery restrictions.
- NEMAC will conduct workshops and training for local fishermen interested in this activity.
- Create a stable supply of locally grown mussels for the NE fish market.
  - 95% of mussels in US market are imported.

Acknowledgements

- NOAA Office of Aquaculture provided grant to establish farm
- Captain Bill Lee, FV Ocean Reporter, Rockport MA
- Jim Blake, FV After Five, Rockport, MA
- Scott Lindell, Director, Scientific Aquaculture Program, Marine Biological Laboratory
- Dave Alves, Northeast Region Aquaculture Coordinator, NOAA NMFS

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